

REMARKS

Claims 10-20 are all the claims pending in the application. In the Summary of the Office Action, the Examiner erroneously indicates that claims 1-11 are all the claims pending in the application. The Examiner is respectfully requested to indicate in the next Office Action that claims 10-20 and newly added claims 21-25 are all the claims pending in the application.

By this Amendment, claims 10, 15, and 16 are hereby amended for purposes of clarity. Applicant submits that these amendments are not viewed as narrowing the claims. By this Amendment, Applicant adds claims 21-25. Claims 21-25 are clearly supported throughout the specification.

I. Preliminary Matters

Applicant thanks the Examiner for acknowledging Applicant's claim to foreign priority and for indicating receipt of the foreign priority documents. Applicant further thanks the Examiner for returning initialed forms PTO/SB/08 submitted with the Information Disclosure Statements filed on July 10, 2007, and November 13, 2006. Applicant thanks the Examiner for accepting the drawing figures filed on January 4, 2006.

II. Summary of the Office Action

The Examiner objects to the specification. Claims 10-12 and 15-18 presently stand rejected under 35 U.S.C. § 102(b). Claims 10-20 presently stand rejected under 35 U.S.C. § 103(a).

III. Objections to the Specification

The Examiner objects to the Abstract of Disclosure because it is allegedly unclear how the workpiece model is created based on the selected workpiece data if the workpiece data is

selected based on the workpiece model (*see* page 2 of the Office Action). The Abstract of Disclose has been amended for clarity and to overcome this objection. In view of this self-explanatory amendment to the Abstract of Disclosure, Applicant respectfully requests the Examiner to withdraw this objection to the specification.

The Examiner also objects to the specification as replete with terms which are not clear, concise, and exact and not in conformance with 35 U.S.C. § 112, first paragraph. The Examiner points to page 4, lines 4-20 of the specification, where it is allegedly unclear how the workpiece model is created based on the selected workpiece data if the workpiece data is selected based on the workpiece model and to page 10, line 2 of the specification, which contains a minor typographical error (*see* pages 2 and 3 of the Office Action). The specification has been amended to cure these minor informalities noted by the Examiner. In view of this self-explanatory amendment to the specification, Applicant respectfully requests the Examiner to withdraw these objections to the specification.

The Examiner also objects to the phrase, "a center of the turning axis," as allegedly being unclear. Applicant respectfully disagrees. Applicant respectfully submits that one of ordinary skill in the art would readily appreciate the meaning of the term. To further Examiner's understanding, Applicant respectfully refers to ¶¶ 166-182 (page 37, line 14 to page 40, line 3) of the specification. As is visible from the example, one of ordinary skill in the art would readily understand that center of the turning axis is the origin, e.g., FIG. 33. In view of the foregoing, Applicant respectfully requests the Examiner to withdraw this objection to the specification.

IV. Rejections under 35 U.S.C. § 112, first paragraph

Claims 10-20 are rejected under 35 U.S.C. § 112, first paragraph, as being indefinite for failing to particularly point out and claim the subject matter which applicant regards as the

invention. Applicant respectfully traverses these grounds of rejection at least in view of the following exemplary comments.

The Examiner alleges that it is unclear how the workpiece model is created based on the selected workpiece data if the workpiece data is selected based on the workpiece model as set forth in claims 10, 15, and 16 (*see* page 3 of the Office Action). Applicant respectfully requests the Examiner to withdraw this rejection of the claims in view of the self-explanatory amendments being made herein.

Claims 10, 15, and 16 are also rejected because allegedly the phrase “a center of the turning axis” is unclear. As discussed above, this phrase is sufficiently clear at least because in light of the specification, one of ordinary skill in the art would readily understand that any axis has a center or an origin, *e.g.*, FIG. 33. Applicant respectfully requests that the Examiner withdraw this rejection of claims 10-20 under 35 U.S.C. § 112, first paragraph.

IV. Rejections under 35 U.S.C. § 102(b)

Claims 10-12 and 15-18 are rejected under 35 U.S.C. § 102(b) as being anticipated by WO 02/095512 to Kamiya. In order to expedite prosecution, the Examiner references corresponding U.S. Patent No. 6,850,814 to Kamiya (hereinafter “Kamiya”). Applicant respectfully traverses this rejection and respectfully requests the Examiner to reconsider this rejection at least in light of the exemplary comments which follow.

Turning first to independent claim 10, the Examiner alleges that Kamiya discloses each of the limitations set forth in claim 10. For example, the Examiner alleges that Kamiya discloses “selecting workpiece data from a workpiece database in which a material, a shape, and a dimension of a workpiece are registered.” Applicant respectfully disagrees.

Kamiya discloses that the machining program preparation apparatus comprises a material shape setting unit that sets information for a two-dimensional shape of a material; and a material shape generating unit that generates a three-dimensional material shape based on the two-dimensional shape information set by the material shape setting unit and gives the generated shape to the machining region extracting unit and the turning region extracting unit. (*See col. 2, lines 16-23 of Kamiya.*)

Thus, Kamiya discloses that the material shape setting unit sets information for a two-dimensional shape of a material, rather than disclosing that workpiece data is selected from a workpiece database, as recited in claim 10. Kamiya does not disclose a workpiece database. Nor does Kamiya disclose the registration of a material, a shape, and a dimension of a workpiece in any such database. Nor does Kamiya disclose that workpiece data is selected from a workpiece database. Kamiya only discloses that the material shape setting unit sets information for a two-dimensional shape of a material. Thus, Kamiya does not disclose “selecting workpiece data from a workpiece database in which a material, a shape, and a dimension of a workpiece are registered.”

The Examiner further alleges that Kamiya discloses “comparing dimension data of the workpiece model with dimension data of the product model,” pointing to col. 6, lines 25-39; col. 8, lines 26-37; and FIG. 6). Applicant respectfully disagrees.

Kamiya discloses that an envelope shape is generated that is determined as being able to be turned based on the part shape input through the part shape input unit (*see col. 6, lines 25-39*). But an envelope shape determined as being able to be turned based on the part shape is not the same as a workpiece model, as recited in claim 10. Furthermore, Kamiya does not disclose that dimensional data of the envelope shape is compared to dimension data of a product model or of a

part shape. Rather, Kamiya discloses that the envelope shape is determined as being able to turn based on the part shape. In short, Kamiya does not disclose or suggest comparing dimension data, as disclosed in claim 10.

The Examiner also alleges that Kamiya discloses that workpiece data is selected automatically using the previously discussed comparison of dimension data in a state in which the product model is arranged on the turning axis and the workpiece data is arranged so that a center axis of each workpiece matches a center of the turning axis. Applicant respectfully disagrees.

Kamiya does not disclose automatically selecting the workpiece data. Kamiya instead discloses that a material shape is input (*see* col. 5, lines 40-61). Kamiya also fails to disclose arranging the product model on the turning axis and arranging the workpiece data so that a center axis of each workpiece matches a center of the turning axis.

The Examiner further alleges that Kamiya discloses “selecting, when there is a plurality of workpiece data involving the product shape and having the smallest diameter for lathe turning around the turning axis, workpiece data having a length equal to or longer than the product shape and a shortest length,” pointing to col. 8, lines 3-37 of Kamiya. Applicant respectfully disagrees.

Kamiya discloses that a three-dimensional material shape is input and that it is not always necessary to input the shape from the material shape input unit. When a material shape can be prepared from a two-dimensional shape, the material shape setting unit may input two-dimensional shape information, and the material shape generating unit may generate the three-dimensional material shape without going through the step S2. *See* col. 8, lines 3-25.

Kamiya further discloses that it is also possible to generate the envelope material shape by taking into account a total length and an external diameter as well as a margin of the part shape (*see col. 8, lines 29-33*).

Kamiya does not disclose selecting, from a plurality of workpiece data, workpiece data having a length equal to or longer than the product shape and a shortest length. Rather than selecting from a plurality of workpiece data, Kamiya discloses that a material shape is generated. Generating is not the same as selecting. Kamiya also does not disclose a plurality of workpiece data. Additionally, Kamiya fails to disclose selecting workpiece data having a length equal to or longer than that product shape and a shortest length. Thus, Kamiya does not disclose “selecting, when there is a plurality of workpiece data involving the product shape and having the smallest diameter for lathe turning around the turning axis, workpiece data having a length equal to or longer than the product shape and a shortest length,” as recited in claim 10.

Accordingly, Kamiya does not disclose all of the elements of independent claim 10. At least for the above reasons, claim 10 is patentable over Kamiya. Claims 11 and 12 are patentable over Kamiya at least by virtue of their dependency on claim 10.

Independent claims 15 and 16 recite features similar to, although not necessarily co-extensive with, the features discussed above with respect to independent claim 10. Consequently, claims 15 and 16 are patentable over Kamiya for at least the reasons discussed above with respect to claim 10. Claims 17 and 18 are patentable over Kamiya at least by virtue of their dependency on claim 16.

V. Rejections under 35 U.S.C. § 103(a)

Claims 10-12 and 15-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,723,203 to Kishi et al. (hereinafter “Kishi”). Applicant respectfully traverses

this rejection and respectfully requests the Examiner to reconsider this rejection in light of at least the exemplary comments which follow.

Turning first to independent claim 10, the Examiner alleges that Kishi discloses “selecting workpiece data from a workpiece database in which a material, a shape, and a dimension of a workpiece are registered.” Applicant respectfully disagrees.

Kishi discloses that one selects a blank profile and enters its dimensional values L, D, D₀, and the position of a base line ZP. See col. 5, lines 16-25. Selecting a blank profile and having a user enter its dimensional values is clearly not the same as selecting workpiece data from a workpiece database. Rather, Kishi discloses that the user enters the data (the dimensional values). Thus, Kishi does not disclose “selecting workpiece data from a workpiece database in which a material, a shape, and a dimension of a workpiece are registered,” as recited in claim 10.

The Examiner also alleges that Kishi discloses “selecting, when there is a plurality of workpiece data involving the product shape and having the smallest diameter for lathe turning around the turning axis, workpiece data having a length equal to or longer than the product shape,” pointing to col. 5, lines 16-32 and FIG. 2D. Applicant respectfully disagrees.

As discussed above, Kishi discloses that the user selects a blank profile and enters its dimensional values and the position of a base line. Kishi does not disclose selecting workpiece data having a length equal to or longer than the product shape and a shortest length. Kishi merely discloses that the user enters the dimensional values; Kishi does not disclose any process for selecting the data. Thus, Kishi does not disclose “selecting, when there is a plurality of workpiece data involving the product shape and having the smallest diameter for lathe turning around the turning axis, workpiece data having a length equal to or longer than the product shape and a shortest length.”

The Examiner concedes that Kishi does not disclose selecting workpiece data having a smallest diameter and a shortest length. But the Examiner alleges that, because Kishi teaches that various machining processes are performed when it is determined that the blank profile dimensions of diameter and length are too large, it would have been obvious to one of ordinary skill in the art to select the workpiece data having a smallest diameter and a shortest length to minimize wasted material since it is commonly known in the art that it is preferable to reduce the diameter of a workpiece in incremental fashion. Applicant respectfully disagrees.

Claim 10 recites *inter alia* “selecting, when there is a plurality of workpiece data involving the product shape and having the smallest diameter for lathe turning around the turning axis, workpiece data having a length equal to or longer than the product shape and a shortest length.”

By way of an exemplary embodiment, a plurality of workpiece data is first selected based on having the smallest diameter for lathe turning around the turning axis, and from that data, workpiece data having length equal to or longer than the product shape and a shortest length is selected. But it would also be possible to first select a plurality of workpiece data involving the product shape and having length equal to or longer than the product shape and a shortest length, and from that data, select workpiece data having the smallest diameter for lathe turning around the turning axis. Thus, multiple design choices could be made.

The Examiner has not provided any reason why a person of ordinary skill in the art would select workpiece data in this manner. Applicant thus respectfully disagrees that “selecting, when there is a plurality of workpiece data involving the product shape and having the smallest diameter for lathe turning around the turning axis, workpiece data having a length equal to or

longer than the product shape and a shortest length" would have been obvious to a person of ordinary skill in the art in light of Kishi, which is silent regarding any selection.

Accordingly, Kishi does not teach or suggest all of the elements of claim 10. At least for the above exemplary reasons, claim 10 is patentable over Kishi. Claims 11 and 12 are patentable over Kishi at least by virtue of their dependency on claim 10.

Independent claims 15 and 16 recite features similar to, although not necessarily co-extensive with, the features discussed above with respect to independent claim 10. Consequently, claims 15 and 16 are patentable over Kishi for at least the reasons discussed above with respect to claim 10. Claims 17 and 18 are patentable over Kishi at least by virtue of their dependency on claim 16.

Claims 13, 14, 19, and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamiya or Kishi in view of U.S. Patent No. 6,112,133 to Fishman (hereinafter "Fishman").

Claims 13 and 14 are patentable over Kamiya and Kishi at least by virtue of their dependency on claim 10. Claims 19 and 20 are patentable over Kamiya and Kishi at least by virtue of their dependency on claim 16. Fishman does not cure the deficiencies of Kamiya and Kishi with respect to claims 10 and 16, as discussed above.

VI. New Claims

In order to provide more varied protection, Applicant adds claims 21-25. Claims 21-25 are patentable at least by virtue of their dependency on claim 10.

VII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/Nataliya Dvorson/

Nataliya Dvorson
Registration No. 56,616

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: December 26, 2007